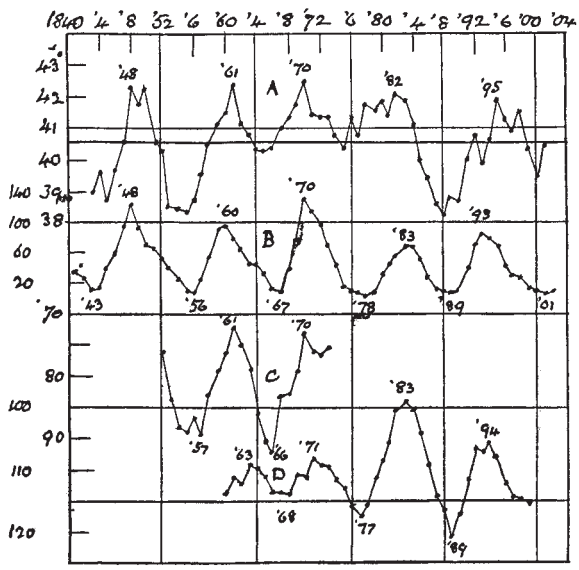
five. The curves are inverted, so that high points represent early dates and low points late dates.

Other examples might be given. This line of inquiry has been followed to some extent by M. Flammarion in France, and it seems desirable that attention should be given to it in this country by those interested in phenology.

The contrast above referred to between the relations of sun-spots and temperature in western Europe and those



in the tropics also calls for elucidation. Probably no meteorologist would now regard it (or other such contrasts) as fatal to the idea of sun-spot influence.

ALEX. B. MACDOWALL.

Retarded Motion of the Great Red Spot on Jupiter.

PERHAPS the most notable fact brought to light by observations of Jupiter during the present season is that the velocity of the great red spot has been again retarded. The rotation period of this well-known object has been as follows in recent years:—

	h.	m.	s.
1898	9	55	41·8
1899	9	55	41·9
1900	9	55	41·7
1901	9	55	40·9
1902 and to May 1903	9	55	39·0
May 26 to August 21, 1903	9	55	41·5

At the end of May last the longitude of the spot was about 30°, whereas at the present time it is 32°, indicating an easterly drift of 2°, whereas during the preceding twelve months the marking had shown a westerly drift of about 1° per month. The spot now follows the zero meridian (system ii. of Mr. Crommelin's ephemeris, *Monthly Notices* R.A.S., lxiii. p. 110, December, 1902) by about 53 minutes. A remarkable disturbance has recently occurred in the southern equatorial belt of Jupiter. In about longitude 140° to 175° (system i.) several nearly black spots have appeared, and the belt in this region is much torn and full of irregularities, changing from night to night, and evidently subject to extensive commotions.

W. F. DENNING.

The Spots on Saturn.

DURING the past two months about 75 transit times of these objects have been taken here. Several of the more conspicuous markings are moving slower than expected, and their positions appear to be well represented by a rotation period of about 10h. 39½m.

W. F. DENNING.

Bishopston, Bristol, August 25.

THE SOUTHPORT MEETING OF THE BRITISH ASSOCIATION.

SINCE the prospective programmes of the various sections of the British Association were obtained for last week's NATURE, the following additional particulars referring to the subsection of Section A, devoted to astronomy and meteorology, and the International Meteorological Committee have been received from Dr. W. N. Shaw, chairman of the subsection.

It is intended that the subsection shall meet on Friday, September 11, and on the following Monday and Wednesday. The proceedings may be expected to be especially interesting on account of the presence of a number of distinguished meteorologists from foreign countries who will be in Southport in connection with the meeting of the International Committee. It is hoped that arrangements can be made to enable the members of the committee to take part in the meetings of the subsection, although separate meetings of the committee must be held for the transaction of business.

The questions already proposed for discussion by the Committee include the initiation of international cooperation in connection with atmospheric electricity and solar physics, and its extension as regards terrestrial magnetism; the revision of the arrangements for the exchange of daily telegraphic reports, and the modification of some of the existing international conventions with regard to the observations made at stations of various orders and the method of recording them.

In the subsection on September 11, after an address by the chairman on methods of meteorological investigation, the president of the Association, Sir N. Lockyer, will read a paper on the correlation of solar and terrestrial phenomena, which will be followed by a discussion, as a preliminary to a proposal for putting the organisation of work in connection with that subject upon an international basis. Dr. Buchan will contribute a communication illustrating the distribution of rainfall in Scotland according to the succession of years of the sun-spot cycle. At the same session it is hoped that some of the members of the International Meteorological Committee who have taken a prominent part in the prosecution of researches in connection with that committee may be able to contribute papers. In particular the work of the committee on cloud observations has recently been brought to a conclusion, and a summary of the final results achieved would be very acceptable.

For any further available time on that or the other days there is already a substantial programme. Various astronomical papers have been referred to in the previous notice. The committees which have to present reports are those on kite observations, on the Ben Nevis Observatory, and on seismological observations, and any one of them, either of themselves or in connection with papers on special points associated with them, may give rise to valuable discussion. Prof. Hergesell, the chairman of the aëronautical committee, will be able to give the latest information as to the international investigation of the upper air, and Dr. Varley will exhibit the record obtained by him for Mr. P. Y. Alexander with an unmanned balloon that reached the extraordinary height of 70,000 feet on a journey from Bath in July. The kite equipment and method of investigation employed by Mr. Dines will be exhibited, if possible, in action.

Prof. Callendar will speak upon self-recording instruments, and thus open the way for the discussion of a subject which is of pressing importance in cooperative meteorological work.

The exhibition of objects of interest in connection with meteorology, terrestrial magnetism, and allied sciences has already been referred to in the columns of NATURE. Arrangements have been made with the view of exhibiting the formation and physical properties of the remarkable vortex ring of smoke produced by the discharge of a mortar of the same type as those which are extensively used in southern Europe with the object of mitigating hailstorms.

By way of illustration of the method adopted by the Meteorological Council for dealing with telegraphic weather reports, a weather chart for north-western Europe, with remarks and forecasts for the British Isles, will be prepared each morning during the meeting on the receipt of telegraphic information at Southport, and a limited number of lithographed copies will be available in the reception room.

THE OLDER CIVILISATION OF GREECE.[1]

STUDENTS of the older civilisation of Greece, which we usually know as "Mycenæan," will welcome the appearance of the eighth volume of the British School at Athens Annual, which, we are glad to say, this year is printed on much better paper than formerly, and shows a great improvement both in editing and arrangement. The volume contains the chief results of the excavations which were undertaken in Crete in 1902, both by the officers of the British School itself and by the Cretan Exploration Fund, of which Mr. A. J. Evans is the prime mover. More than a third of the book is occupied by an elaborate paper by Mr. Evans, who continues his annual description of the results of his excavations at Knossos; this is profusely illustrated by no less than seventy-four reproductions from photographs and line drawings, a map showing the state of the excavations at the present time, and two plates. Mr. Evans's paper is exceedingly interesting reading, and his discoveries appear to have been, as is usually the case, of first-class importance; we earnestly hope that good fortune may attend his labours in the future at Knossos as it has done in the past! It is, however, obvious that, for extensive excavations of this kind, which involve heavy and prolonged expenditure, increased funds are necessary. It is well known that Mr. Evans has contributed to the expenses of the work from his own private means far more than was right, but it is clear that no archæologist, however enthusiastic he may be, can continue to spend his own money indefinitely on researches which would, in any other country but England, be undertaken either by the Government or by some wealthy academy.

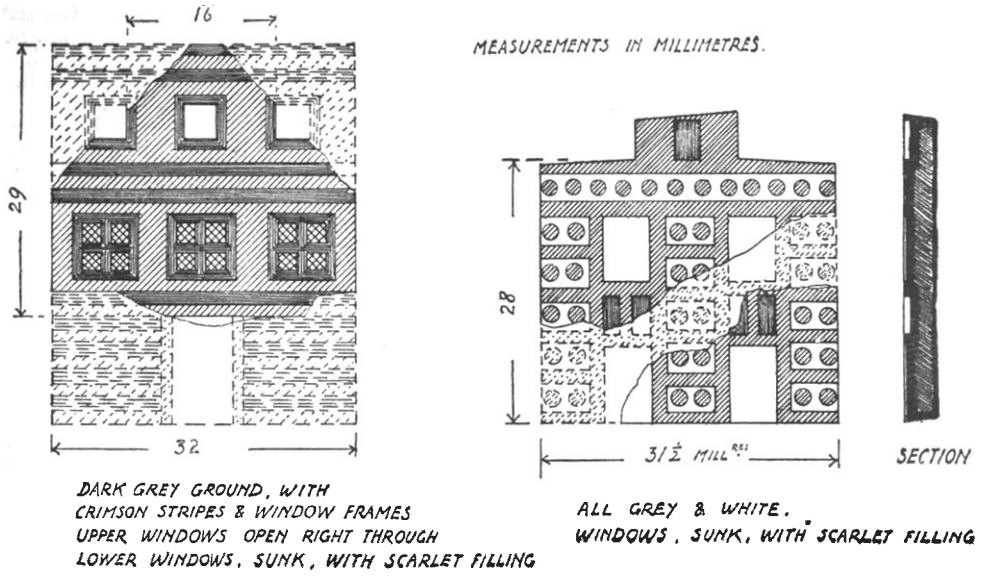


FIG. 1.—Porcelain Tablets in Form of Houses (slightly enlarged).

The most important objects described by Mr. Evans are:—(1) A series of tablets of porcelain mosaic representing houses and towers, which are curiously like children's dolls' houses, with a door in the middle and the windows divided by mullions. (2) A series of similar porcelain tablets with representations of warriors and animals. (3) A set of terra-cotta models of pillar-altars, with figures of doves perched upon the top of them. (4) Fragments of ivory figures of leaping youths, with the hair represented by bronze spirals let into the ivory. (5) A small shrine discovered *in situ* in the southern part of the palace. The shrine and its contents have been carefully kept in their original position, and a small house has been built over them to protect them from the weather. The contents consist of rude iconic figures of deities, and a horned altar, which is somewhat Canaanitish in type. These horned altars are familiar objects in Cretan diggings, and they are usually described by Mr. Evans as "horns of consecration." (6) Objects inscribed in ink with Cretan hieroglyphics. These are of great importance, for they show that the Cretans employed the Egyptian means of writing as well as the Mesopotamian; they used both pen and ink as well as clay tablet and stylus. (7) The sanitary arrangements of the palace, which appear to have been extraordinarily modern in character. The latrines were water-closets, which were provided with carefully constructed drains made of terra-cotta pipes, the sections of which remind one (see Fig. 7, p. 13) of a sanitary engineer's catalogue of the present day. The exigencies of space will not allow us to enumerate the minor discoveries, and we refer the reader to the Annual itself for a full account of them.

Mr. Evans ends his paper with some speculations as to the possible connection of Crete with Egypt as early as the time of the fourth and fifth dynasties, *i.e.* about B.C. 3700–B.C. 3200, and it is of interest to note that Mr. H. R. Hall, of the British Museum, publishes in this volume of the Annual a paper dealing more or less with this very subject. Mr. Hall traces the history of the connection between Egypt and the peoples of the Ægean, and the southern coast

[1] "The Annual of the British School at Athens." No. viii. Session 1901–1902. Pp. 348, 20 plates, and many illustrations. (London: Macmillan and Co., Ltd.)